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| APPLICATION NO.                  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------------|-------------|----------------------|---------------------|------------------|
| 10/568,248                       | 09/18/2006  | Marc Peuker          | 58738US004          | 9692             |
| 32692                            | 7590        | 07/10/2009           | EXAMINER            |                  |
| 3M INNOVATIVE PROPERTIES COMPANY |             |                      | MAI, HAO D          |                  |
| PO BOX 33427                     |             |                      |                     |                  |
| ST. PAUL, MN 55133-3427          |             |                      | ART UNIT            | PAPER NUMBER     |
|                                  |             |                      | 3732                |                  |
|                                  |             |                      | NOTIFICATION DATE   | DELIVERY MODE    |
|                                  |             |                      | 07/10/2009          | ELECTRONIC       |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com  
LegalDocketing@mmm.com

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/568,248             | PEUKER ET AL.       |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | HAO D. MAI             | 3732                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 15 June 2009.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 51-89 is/are pending in the application.  
 4a) Of the above claim(s) 65-81, 85-88 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 51-64, 82-84, 89 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 14 February 2006 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 9/22/06; 5/10/07; 2/11/08.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Election/Restrictions***

1. Applicant's election without traverse of **Group I, claims 51-64, 82-84, and 89**, in the reply filed on 06/15/2009 is acknowledged. Accordingly, claims 65-81 and 85-88, are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 52-64 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 52 recites "the outlet openings of said compartments" (line 2), which lacks sufficient antecedent basis. Note that such "outlet openings" are not recited previously in the claims. Furthermore, only one compartment (singular) is positively recited previously in the claims.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 51, 53-54, 82-84, and 89, are rejected under 35 U.S.C. 102(b) as being anticipated by Wilcox et al. (5,743,436).**

Regarding claim 51, Wilcox et al. disclose a unit-dose syringe (Figs. 1-4) comprising: a cartridge 12 having front and rear ends (best shown as 52 and 51 in Fig. 4) and a compartment 50 for each

component; a static mixer 56 connectable with said cartridge at its front end, a mixing tip 54 being integrally connected to the cartridge at said front end of said cartridge and receiving said static mixer, said mixing tip and said cartridge being integrally formed as one part (Fig. 4). The syringe further comprises a plunger 42 being located in the inactivated state of the syringe, at said rear end of said cartridge, and movable towards the front end of said cartridge for dispensing material from said cartridge through said mixing tip.

As to claims 53-54, the static mixer 56 comprises a mixing helix (column 5 lines 20-22), an outlet tip at the front end of said mixing helix, wherein said outlet tip projects from the front end of the mixing tip. As to claims 82-84, the cartridge 12 has a substantially circular circumferential outer surface with the compartments 50 arranged concentrically. As to claim 89, the syringe may be pre-filled with a multi-component dental material (column 1 lines 40-50).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 52-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilcox et al. in view of Pauser et al. (2004/0262332 A1).**

As to claims 52-55, Wilcox et al. disclose the invention substantially as claimed except the static mixer 56 being collapsible and having a closure plug at its rear end. Pauser et al. disclose a syringe having a helix static mixer 5 that is collapsible (Fig. 3) and having a closing or sealing elements 11 at its rear end for closing the cartridge 6 (Fig. 1; paragraph 106). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wilcox et al. by incorporating such closing or sealing plugs/elements at the rear end of the static mixer in order to seal the cartridge before

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use, preventing damage or contamination to the material inside the cartridge. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wilcox et al. by making the helix static mixer collapsible or compressible in order to efficiently empty all the material from the mixer.

8. **Claims 56-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilcox et al. in view of Pauser et al. as applied to claim 55, and further in view of Hunter et al. (6,572,031).**

As to claim 56, Wilcox/Pauser disclose the invention substantially as claimed except for the static mixer having an outlet tip that projects from the front end of the mixing tip. Hunter et al. disclose a syringe having a static mixer 4 with an outlet tip 6 that projects from the front end 16 of the mixing tip 10/17 (Fig. 4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wilcox/Pauser by having the mixer's outlet tip projecting from the front end of the mixing tip as taught by Hunter et al. in order to establish a precise and fine point of delivery of the material. As to claims 57-59, Hunger et al. show that the static mixer is accommodated within the mixing tip 10/17; and that the outlet tip 6 of the mixer comprise corresponding retainers (area 5) that prevent the outlet tip from completely extends beyond the mixing tip. Note that such retainers comprise a recess (shoulder) in the wall that catches the projections (tapers) at the circumference of the outlet tip.

As to claims 60-64, Wilcox et al. in combination with Pauser and Hunter et al. show that the first and second compartment are connected by a passageway (Wilcox; within area 52), and the plug(s) as provided by Pauser is capable of sealing either one of the compartments; wherein activation of said syringe by said plunger moves the plugs along the longitudinal direction of the syringe in order to free the passageway.

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAO D. MAI whose telephone number is (571)270-3002. The examiner can normally be reached on Monday-Friday. If attempts to reach the examiner by telephone are unsuccessful, the

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examiner's supervisor, Cris Rodriguez can be reached on (571) 272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Hao D Mai/  
Examiner, Art Unit 3732

/Cris L. Rodriguez/  
Supervisory Patent Examiner, Art Unit 3732